

Remarks/Arguments:

Claims 1, 3-6, 9, 11-14 and 17-19 are presently pending, with all pending claims rejected. Claims 1, 4-6, 9, 12-14 and 17-19 are currently amended and claims 3 and 11 are cancelled. Support for the claim amendments can be found throughout the application as originally filed. For example, see the paragraphs spanning pages 8 and 9; page 14, lines 12-14; and claim 3 of the application as originally filed. No new matter is added. Reconsideration is respectfully requested in view of the above amendments and the following remarks.

Section 8 of the Office Action recites that "claim 17 is objected to because of the following informalities: claim 17 recites 'a second digital interface' without reciting a 'first digital interface'." Applicant herein amend claim 17 to rename the first and second digital interfaces such that a first digital interface is recited before a second digital interface. Applicant contends that the amendment to claim 17 addresses the Examiner's objection and respectfully requests that the objection to claim 17 be withdrawn.

Section 13 of the Office Action recites "claim 1, 3-5, 9 and 11-13 are rejected under 35 U.S.C. 103(a) as being unpatentable over European Patent Application No. EP0930556 by Komuro et al. [herein Komuro] in view of Industrial Standard 13818-1, 'Information technology - Generic coding of moving pictures and associated audio information: Systems' by ISO/IEC [herein Industrial Standard]." Claim 19 is also addressed in this section of the Office Action. Although not conceding the rejection, Applicant herein amends claims 1 and 9 to expedite prosecution.

Claim 1 includes features not disclosed taught or suggested by Komuro in view of the Industrial Standard. Claim 1 is directed to a revocation information transmission method used in a system including a plurality of contents transmitting devices for transmitting contents in a plurality of contents receiving devices for receiving contents on a network. The method of claim 1 includes, *inter alia*, the following steps:

... individually uploading revocation information ... from each of the contents transmitting devices or each of the contents receiving devices in case of mutual authentication failure to a revocation integrator;

integrating, with the revocation integrator, the revocation information from each of the contents transmitting devices, as an integration revocation list representing a common list of revocations for the

contents receiving devices and the contents transmitting devices on the network;

... transmitting the stream to the contents transmitting devices on the network;

wherein the stream is an MPEG transport stream and the integrated revocation list is transmitted by using a data stretcher of a section of the MPEG transport stream.

This means that revocation information from each of the contents transmitting devices or each of the contents receiving devices in case of mutual authentication failure are individually uploaded. Moreover, the revocation information from each of the contents transmitting devices is integrated by a revocation integrator as an integrated revocation list representing a common list of revocations for the contents receiving devices and the contents transmitting devices on the network. Furthermore, the integrated revocation list is transmitted to the contents receiving devices and the contents transmitting devices on the network as an MPEG transport stream using a data structure of a section of the MPEG transport stream.

Komuro Reference

Komuro discloses a revocation list production section 111 of a management center 110 that produces a revocation list in which device IDs are listed to indicate illegal devices. The revocation list is transmitted to a data broadcasting reception apparatus 130 through a satellite 120. (See Komuro at paragraphs [0088] to [0089].) In Komuro, when this revocation list is received the data broadcasting reception apparatus 130 compares the device IDs listed in the revocation list with the device ID of connected devices such as a DVD player and a monitor connected to the data broadcasting reception apparatus 130 (which are stored in a connected device_ID table (CDT)). If the CDT includes a device ID which coincides with one of the device IDs listed in the revocation list, the data broadcasting reception apparatus 130 reports the device ID to the connected devices. (See the abstract of Komuro.) That is, Komuro discloses management center 110 that includes the revocation list production section 111 which forwards a revocation list to a data broadcasting reception apparatus 130. Komuro, however, is silent regarding integrating revocation information with the revocation integrator as an integrated revocation list representing a common list of revocations for the contents receiving devices and the contents transmitting devices on the network as set forth in claim 1. This is because, Komuro merely teaches sending a revocation list from a single source (i.e. the management

center 110) to data broadcast reception apparatus which, in turn, may send the revocation list to other data broadcast reception apparatuses.

The Examiner recites:

Komuro discloses uploading revocation information from the information processing apparatus via transmission line to be integrated with revocation information from "other information processing apparatus" in paragraph 71 on page 8. This disclosure clearly anticipates that there is a plurality of devices all of which are uploading and sharing revocation information which is integrated into a single revocation list which is then redistributed to all the apparatuses.

Applicant respectfully disagrees with this interpretation of paragraph 71. In paragraph 71 enciphered data is received by an information processing apparatus. The receiving information processing apparatus includes a storage means that stores identification numbers of other information processing apparatus. The enciphered data includes a list of identification numbers of information processing apparatus. If the receiving information processing apparatus identifies a match between the identification numbers stored by the information processing apparatus and the information processing apparatus associated with the enciphered data, the information processing apparatus transmits the enciphered data to those information processing apparatus. This paragraph does not, however, disclose uploading and sharing revocation information that is integrated into a single revocation list as suggested in the Office Action.

Industrial Standard

The Industrial Standard does not overcome the deficiencies of Komuro. This is because, the Industrial Standard does not disclose or suggest "individually uploading revocation information ... from each of the contents transmitting devices or each of the contents receiving devices in case of mutual authentication failure to a revocation integrator." Or the integrating feature of "integrating the revocation information, with the revocation integrator, from each of the contents transmitting devices with the revocation information from each of the contents transmitting devices, as an integrated revocation list representing a common list of revocations for the contents receiving devices and the contents transmitting devices on the network" as set forth in claim 1.

The present application describes a revocation information transmission method, wherein revocation information including information about an unjust apparatus is multiplexed

into a stream used for transmission so that all the video output apparatuses such as a set top box (STB) have revocation information in common. Thus, it is possible to exclude unjust delay to improve security.

Although using a broadcasting system in the present invention allows all the video output apparatuses such as a STB to have revocation information in common, the broadcasting system may cause an error in a transmission line. Since the broadcasting system contains important information such as maker ID and an apparatus ID, if an incorrect maker ID or apparatus ID is received due to the error occurred in the transmission line, the incorrect ID is assumed as an unjust apparatus, which is a problem.

To solve the problem, the present invention discloses "the stream is an MPEG transport stream, and the integrated revocation information is transmitted by using a data structure of a section of the MPEG transport stream." As Fig. 12 of the Applicant's invention shows, the revocation information is stored in the section structure having error prevention improved by CRC-32. The structure allows no error information to be transmitted.

Specifically the present invention shows the steps of: packetizing the integrated revocation list and multiplexing it into a stream; and transmitting the stream. The steps allow all the video output apparatuses such as STB to have revocation information in common. In addition, the stream is an MPEG transport stream, and the integrated revocation information is transmitted by using a data structure section of the MPEG transport stream. Therefore, the structure can solve the problem of transmitting incorrect revocation information.

Komuro discloses that illegal coping of data by an illegal apparatus is prevented by comparing the device_IDs listed in the revocation list received by a data broadcasting reception apparatus with a device to which the data broadcasting reception apparatus is connected.

The applied references neither disclose nor suggest that "the stream is an MPEG transport stream, and the integrated revocation information is transmitted by using a data structure section of the MPEG transport stream." Therefore, the references can not solve the problem of transmitting incorrect revocation information, which is a unique aspect of the present invention.

Furthermore, Komuro and the Industrial Standard fail to teach transmitting the integrated revocation information in a stream to the contents receiving devices and the

contents transmitting devices wherein the stream is an MPEG transport stream, and the integrated revocation list is transmitted by using a data structure of section of the MPEG transport stream.

Accordingly, as neither Komuro or the Industrial Standard disclose teach or suggest the above described features of claim 1, Applicant contends that claim 1 as amended is allowable over Komuro in view of the Industrial Standard. Accordingly, Applicant respectfully requests that the rejection of claim 1 be withdrawn.

Claim 9, which includes features similar to the allowable features described above with respect to claim 1, is submitted to be allowable over Komuro in view of the Industrial Standard for at least reasons similar to those discussed above regarding claim 1.

Claims 4, 5, 12, 13 and 19 which include all the features of either claim 1 or claim 9, are submitted to be allowable over Komuro in view of the Industrial Standard for at least the same reasons discussed above for claims 1 and 9.

Section 14 of the Office Action recites that "claims 6 and 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over [Komuro] in view of [the Industrial Standard] further in view of U.S. Patent No. 5,692,124 by Holden et al. [herein Holden]." Claims 6 and 14 which include all the features of claim 1 and claim 9, respectively, are submitted to patentably distinguish over Komuro in view of the Industrial Standard for at least the same reasons as discussed above with respect to claim 1 and claim 9.

The addition of Holden does not overcome the deficiencies of Komuro and the Industrial Standard. This is because, Holden does not disclose or suggest the uploading revocation information, the integrating revocation information, and the MPEG transport stream features of claim 1, and similar features recited in claim 9.

Accordingly, Applicant contends claims 6 and 14 are allowable over Komuro and the Industrial Standard in further view of Holden.

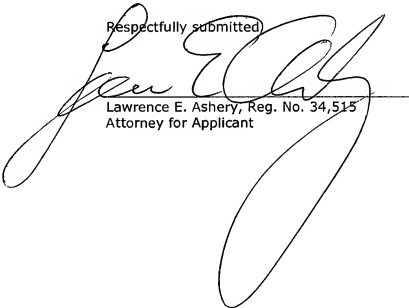
Section 10 of the Office Action recites that "claims 17 and 18 are rejected under 35 U.S.C. 102(b) as being anticipated by European Patent Application Publication No. EP0930556 by Komuro et al.," (herein Komuro). Although not conceding the rejection Applicant herein amends claims 17 and 18 in order to expedite prosecution.

Claim 17 includes features that are not disclosed, taught, or suggested by Komuro, nor any of the other references. For example, claim 17 includes a revocation integrator that integrates revocation information from the contents transmitting devices or the contents receiving devices. Additionally, claim 17 recites that the revocation information is transmitted an MPEG transport stream. As discussed above, these feature distinguish the claimed invention over the applied references. Accordingly, Applicant contends that claim 17 is allowable.

Likewise, claim 18 includes features that are not disclosed, taught, or suggested by Komuro, nor any of the other references. Claim 18 is directed to a revocation information managing apparatus. The apparatus includes a receiving means for receiving an integrated revocation list from a revocation integrator where the integrated revocation list is transmitted using a data structure of a section of an MPEG transport stream. As discussed above the revocation integrator and transmitting of a data structure in an MPEG transport stream are features of the claimed invention that are not disclosed in the applied references. Accordingly, Applicant contends that claim 18 is allowable.

In view of the above amendments and remarks, Applicant contends that the application is in condition for allowance. Notification to such effect is earnestly solicited.

Respectfully submitted,


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